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# RTD UPDATES: Fertilizer

*Data updates from the Resources and Technology Division*

Economic Research Service  
U.S. Department of Agriculture

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## 1993 Fertilizer Use by State and for Major Field Crops

- Total nitrogen use was down slightly in 1993 from 1992; but potash and phosphate use were up.
- Nitrogen use per acre averaged lower on corn and soybeans, slightly higher on wheat, and no change on cotton.
- 97 percent of corn received fertilizer, 87 percent of wheat, 85 percent of cotton, and 29 percent of soybeans.

This issue of **RTD UPDATES** summarizes 1993 fertilizer use for all States and application rates for the 10 major States growing corn, 6 growing cotton, 14 growing soybeans, and 15 growing wheat. In 1992/93, 49.1 million tons of fertilizer materials were used on and off the farm in the United States and Puerto Rico, up over 2 percent from 1992. Use of plant nutrients of 20.9 million tons represents an increase of 1 percent from 1992. Nitrogen use decreased 1 percent while phosphate and potash use increased 6 and 1 percent.

Fertilizer use on corn, the most fertilizer-using crop, in 1993 was as follows: Nitrogen--97 percent of planted acres fertilized (same as 1992), averaging 123 pounds per acre, down 4 pounds from 1992; Phosphate--82 percent of planted acres fertilized (same as 1992), averaging 56 pounds per acre, down 1 pound from 1992; Potash--71 percent of acres fertilized (72 percent in 1992), averaging 79 pounds per acre, the same as 1992. Percent of acres fertilized at or before seeding decreased from 72 in 1992 to 69 in 1993. The 1993

flood prevented many midwestern farmers from making more than one fertilizer application during the crop year.

Fertilizer use on wheat, the second most fertilizer-using crop, in 1993 was as follows: Nitrogen--86 percent of acres fertilized (83 percent in 1992), averaging 64 pounds per acre, up 1 pound from 1992; Phosphate--60 percent of acres fertilized (56 percent in 1992), averaging 34 pounds per acre, the same as in 1992; Potash--17 percent of acres fertilized (18 percent in 1992), averaging 35 pounds per acre, down 4 pounds from 1992. Percent of acres fertilized at or before seeding increased from 71 in 1992 to 72 in 1993.

Fertilizer use on soybeans in 1993 was as follows: Nitrogen--14 percent of planted acres fertilized (15 percent in 1992), averaging 20 pounds per acre, down 2 pounds from 1992; Phosphate--23 percent of planted acres fertilized (22 percent in 1992), averaging 46 pounds per acre, down 1 pound from 1992; Potash--27 percent of planted acres fertilized (26 percent in 1992), averaging 79 pounds per acre, up 3 pounds from 1992. Percent of acres fertilized at or before seeding increased from 95 in 1992 to 97 in 1993.

For cotton, percent of acres treated and application rates remained about the same overall.

Other fertilizer statistics appeared in the October 1993 **Agricultural Resources, Inputs Situation and Outlook Report**. Contact Harold Taylor (202) 219-0464.

### About RTD UPDATES

**RTD UPDATES** is a semimonthly series featuring data relating to agricultural resources, the environment, food safety, and technology. These **UPDATES** report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this **UPDATE**. If you would like to be added to the mailing list or have other questions about **RTD UPDATES**, contact Richard Magleby, (202) 219-0436.

### Fertilizer use 1960-93

Million nutrient tons

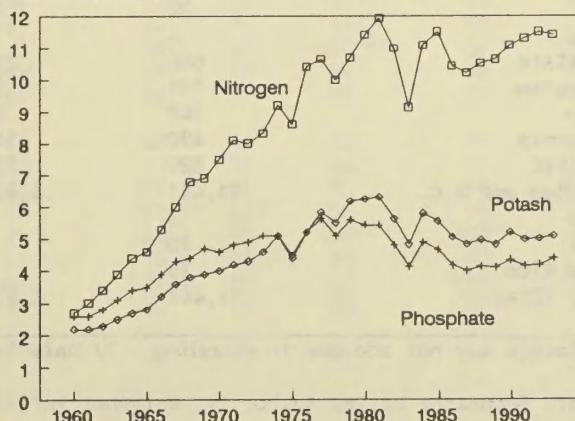




Table 1--Plant nutrient use by State for years ending June 30 1/

State/ region	1992			1993		
	Nitrogen	Phosphate	Potash	Nitrogen	Phosphate	Potash
	1,000 nutrient tons					
Maine	13	10	9	12	8	7
New Hampshire	3	1	2	3	1	2
Vermont	6	4	6	5	4	5
Massachusetts	13	6	8	13	6	9
Rhode Island	2	1	1	5	1	1
Connecticut	5	2	3	7	3	4
New York	95	73	95	93	62	83
New Jersey	23	12	16	32	16	22
Pennsylvania	71	55	60	96	73	68
Delaware	22	8	17	20	7	15
Maryland	75	36	49	63	30	45
NORTHEAST	328	208	267	350	211	262
Michigan	257	111	228	240	109	218
Wisconsin	236	115	271	203	107	248
Minnesota	626	242	310	629	259	214
LAKE STATES	1,119	468	809	1,073	474	680
Ohio	331	140	251	377	185	346
Indiana	584	250	395	457	209	342
Illinois	951	391	639	866	377	597
Iowa	969	309	452	840	336	452
Missouri	443	178	250	414	181	252
CORN BELT	3,279	1,269	1,987	2,954	1,288	1,989
North Dakota	383	163	28	497	190	32
South Dakota	169	84	19	205	92	21
Nebraska	755	173	35	729	184	38
Kansas	647	158	40	659	180	42
NORTHERN PLAINS	1,954	577	123	2,090	646	134
Virginia	119	80	112	108	76	103
West Virginia	10	10	9	10	10	10
North Carolina	218	109	196	219	107	192
Kentucky	208	111	139	208	115	142
Tennessee	164	100	127	161	101	128
APPALACHIA	718	409	584	705	410	575
South Carolina	78	35	70	80	36	70
Georgia 2/	203	116	163	214	126	276
Florida	248	95	258	253	98	258
Alabama	125	49	66	136	55	76
SOUTHEAST	655	295	556	682	314	680
Mississippi	205	62	101	187	54	108
Arkansas	277	67	105	267	73	109
Louisiana	192	50	73	161	45	71
DELTA STATES	674	180	280	615	172	288
Oklahoma	343	77	33	301	92	34
Texas	849	211	113	934	248	133
SOUTHERN PLAINS	1,192	288	146	1,235	340	168
Montana	123	65	14	132	74	16
Idaho	210	90	14	213	93	20
Wyoming	67	13	2	86	23	2
Colorado	130	49	14	174	50	19
New Mexico	33	13	6	36	16	6
Arizona	79	27	1	73	25	1
Utah	20	12	3	28	12	16
Nevada	4	3	1	3	3	1
MOUNTAIN	666	270	55	744	296	80
Washington	191	53	36	193	53	38
Oregon	149	44	30	132	41	28
California	490	141	135	554	202	164
PACIFIC	829	238	201	879	297	230
48 States and D.C.	11,411	4,202	5,007	11,326	4,447	5,086
Alaska	3	1	1	3	1	0
Hawaii	18	9	18	17	6	13
Puerto Rico	15	6	14	11	4	10
U.S. TOTAL	11,447	4,218	5,040	11,358	4,458	5,110

1/ Totals may not add due to rounding. 2/ Data is estimated.

Source: Tennessee Valley Authority, National Fertilizer and Environmental Center. Commercial Fertilizers 1993.



Table 2--Fertilizer use on corn for grain, 1993

State	Acres receiving:						Application rates			Proportion fertilized		
	Acres planted 1/ Thousand	Acres surveyed No.	Any ferti- lizer -----Percent-----	N	P2O5	K2O	N	P2O5	K2O	At or before seeding	After seeding	Both
Illinois	10,500	738	99	98	81	81	150	76	106	68	3	29
Indiana	5,600	479	99	97	90	79	134	68	114	58	4	38
Iowa	12,000	621	98	98	79	77	114	52	63	76	5	19
Michigan	2,500	308	98	98	93	88	118	53	83	47	1	52
Minnesota	6,300	477	97	97	89	83	103	50	67	82	1	17
Missouri	2,200	247	99	99	76	77	132	53	66	79	8	13
Nebraska	8,100	566	98	98	72	28	136	36	19 *	52	10	38
Non-irrigated	2,665	181	96	96	66	29	100	29	14 *	62	13	25
Irrigated	5,435	385	99	99	75	28	153	38	21 **	48	8	44
Ohio	3,350	465	99	99	95	90	147	71	105	42	2	56
South Dakota	3,400	285	82	82	68	23	70	38	22	83	4	13
Wisconsin	3,400	352	98	97	94	93	80	44	64	75	1	24
Area	57,350	4,538	97	97	82	71	123	56	79	67	4	29

\* = Data less reliable, Coefficient of Variation (CV) greater than 10 percent. \*\* = CV greater than 20 percent.

1/ Preliminary.

Table 3--Fertilizer use on cotton, 1993

State	Acres receiving:						Application rates			Proportion fertilized		
	Acres planted 1/ Thousand	Acres surveyed No.	Any ferti- lizer -----Percent-----	N	P2O5	K2O	N	P2O5	K2O	At or before seeding	After seeding	Both
Arizona	330	81	98	98	44	10	149	68 *	5 **	3	63	34
Arkansas	1030	131	96	96	76	74	103	48	76	25	7	67
California	1030	182	98	98	33	6	139	51	149 **	44	28	28
Louisiana	890	92	86	86	51	52	85	45	66	49	30	20
Mississippi	1380	159	95	95	43	68	111	57	94	14	13	73
Texas	5700	506	77	77	58	26	64	43	21	64	15	21
Area	10,360	1,151	85	85	54	36	89	47	58	46	18	36

\* = CV greater than 10 percent. \*\* = CV greater than 20 percent. 1/ Preliminary.

Table 4--Fertilizer use on soybeans, 1993

State	Acres receiving:						Application rates			Proportion fertilized		
	Acres planted 1/ Thousand	Acres surveyed No.	Any ferti- lizer -----Percent-----	N	P2O5	K2O	N	P2O5	K2O	At or before seeding	After seeding	Both
Northern:												
Illinois	9,100	535	27	12	20	26	24 *	57	90	98	1	1
Indiana	4,900	356	42	19	29	41	12 *	45	91	95	3	2
Iowa	5,500	441	14	8	11	13	15	51	73	95	5	0
Minnesota	5,600	436	15	11	11	14	17 *	35	62 *	94	5	1
Missouri	4,200	296	22	12	19	21	21 **	37	64	98	2	0
Nebraska	2,500	233	20	18	12	5	14 *	32	30 **	87	13	0
Ohio	4,200	397	50	14	31	49	17	49	94	98	2	0
Sub-area	36,000	2,694	26	12	18	24	18	47	83	96	3	1
Southern:												
Arkansas	3,500	316	41	14	33	37	42 *	46	68	99	0	1
Georgia	600	136	69	55	63	68	16	35	66	99	1	0
Kentucky	1,200	186	37	27	35	32	21	56	75	97	3	0
Louisiana	1,250	179	12	2	12	12	23 **	42	56	95	5	0
Mississippi	2,000	192	21	10	20	21	16 *	39	60	100	0	0
North Carolina	1,300	170	62	54	56	61	19 *	34	80	98	2	0
Tennessee	1,050	176	47	28	42	47	27 *	53	69	100	0	0
Sub-area	10,900	1,355	38	22	34	36	24	44	70	98	1	1
Area	46,900	4,049	29	14	22	27	20	46	79	97	2	1

\* = CV greater than 10 percent. \*\* = CV greater than 20 percent. 1/ Preliminary.

Source: 1993 Cropping Practices Survey, USDA.



Table 5--Fertilizer use on wheat, 1993

State	Acres 1/ 2/	Acres surveyed	Acres receiving:				Application rates			Proportion fertilized		
			Any ferti- lizer	N	P205	K20	N	P205	K20	At or before seeding	After seeding	Both
	Thousand	No.	-----Percent-----				-----Pounds/acre-----			-----Percent-----		
Winter wheat:												
Colorado	2,550	78	67	67	14	4	50	41 **	22 **	75	19	6
Idaho	850	93	95	95	63	8	102	37	19 **	40	22	38
Illinois	1,550	75	99	99	81	68	87	70	83	13	19	68
Kansas	11,300	252	87	87	51	8	55	30	19 *	62	10	28
Missouri	1,400	67	98	96	77	75	84	52	61	34	22	44
Montana	2,500	93	88	88	84	12	41	29	17 **	79	2	19
Nebraska	2,100	100	75	75	39	12	48	25	10 *	68	13	20
Ohio	1,000	70	99	99	95	95	79	66	74	12	5	84
Oklahoma	5,500	153	96	96	50	10	68	38	22 *	54	11	35
Oregon	860	86	93	93	13	8	62	36 **	31 **	59	12	29
South Dakota	1,400	64	45	45	36	2	36 *	29	9	56	18	25
Texas	3,700	183	77	77	32	5	79	40	16 *	60	19	21
Washington	2,501	139	98	98	38	5	65	22	23 **	81	4	14
Area	37,211	1,453	86	86	49	15	63	37	48	58	12	30
Spring wheat:												
Minnesota	2,500	66	94	94	84	61	97	39	28 *	96	2	2
Montana	2,650	82	65	65	61	13	27	22	9 **	91	0	9
North Dakota	9,700	113	93	92	87	19	67	30	11 *	98	1	1
South Dakota	2,100	58	81	81	71	10	56	24	13	98	0	2
Area	16,950	319	88	88	81	23	66	30	18 *	97	1	2
Durum wheat:												
North Dakota	1,950	122	73	73	60	7	51	26	12 **	100	0	0
All wheat 3/	56,110	1,894	87	86	60	17	64	34	35	72	8	20

\* = CV greater than 10 percent. \*\* = CV greater than 20 percent.

# = Insufficient data.

1/ Acres are harvested for winter wheat and planted for all other crops. 2/ Preliminary. 3/ Does not include winter wheat in MN and ND; spring wheat in CO and WA; or durum wheat in MN, MT, and SD.

Source: 1993 Cropping Practice Survey, USDA.

## RTD UPDATES

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